HYDRITE CHEMICAL CO.

Central Engineering

Ronald E. Carrington
Director of Central Engineering
Hydrite Chemical Co.
114 N. Main St,
Cottage Grove, WI 53527

Hydrite – Terre Haute Air Monitoring Plan

Enclosed is the air monitoring plan for Hydrite's facility located in Terra Haute, Indiana The objective is to install a new air quality monitoring system for sulfur dioxide (SO_2) and ammonia (NH_3) in and around the

Terra Haute facility made operational April 1, 2016.

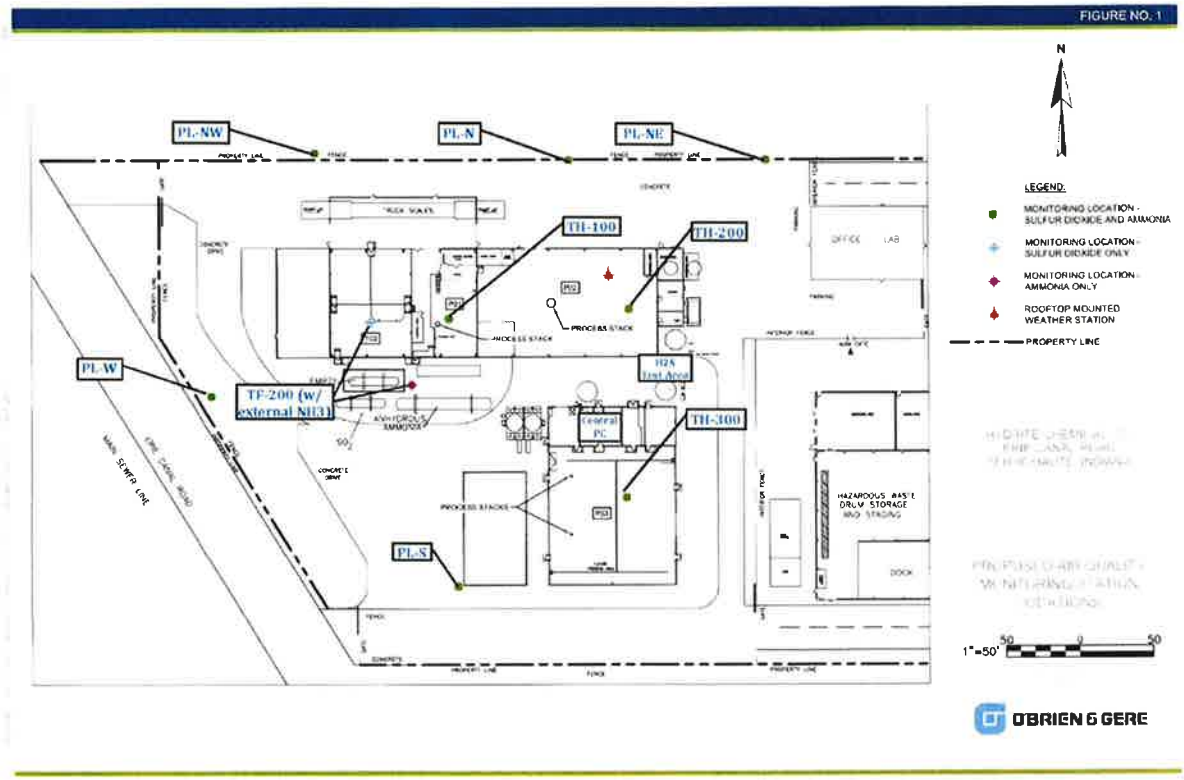
Monitoring Locations

The Terre Haute air quality monitoring (AQM) network will measure air concentrations of SO_2 and NH_3 in and around the facility at AQM stations in 9 locations as follows:

- Outdoors
  - » Hydrite property line facing the racetrack and 4 nearest residential communities – 5 stations
- Inside the Facility or near Facility Emission Sources
  - » In Buildings PO1 and PO2 (B1 process area plus NH_3 bullet tank outside PO2) – 3 stations
  - » In Building PO3 (B2 process area) – 1 station

The stations layout is presented in Figure 1.

Figure 1. Air Quality Monitoring Station Locations



Equipment

Air Monitors

SO_2 and NH_3 will be measured at each station using a Rae Systems MultiRAE Lite real-time monitors. Each SO_2 and NH_3 monitor will be configured to continuously measure real-time concentration 24 hours per day, 7 days per week. Real-time data will be stored as 15-minute time-weighted averages from outdoor stations and 1-hour time-weighted averages from the indoor stations. Each station will be configured with at least two automated alarms for SO_2 and NH_3 – one at the action level and one at the lower control level. Alarms will automatically trigger notifications at a computer located in the Facility Control Room in PO3, and will also send text message alarms to other specified personnel. The system will also include a Racetrack AQM station to include a stoplight-type lighted alarm system with signals as follows if we choose to activate it:

- **Green Light** – SO_2 and NH_3 levels normal
- **Yellow Light** – SO_2 or NH_3 levels elevated (Control Level Alarm)
- **Red Light** – SO_2 and NH_3 level high (Action Level Alarm)

Indoor stations (except the NH_3 bullet tank monitor in PO2) will have a similar three-light tower system with the same colors (one tower per station), but will also have an audible local alarm (buzzer) that will activate when the Action Level is reached.

Weather Station

One on-site weather station located on the PO1 building roof. The station sensors will continuously measure wind speed, wind direction, temperature and relative humidity. Real-time continuous data will be automatically saved as both 15-minute and 1-hour time-weighted averages.

Data Acquisition and Communication

At each of the 9 AQM stations and the weather station, real-time data will be automatically sent by digital or analog sensor output to a Campbell CR850 data logger where the data will be time-averaged and electronically stored. Instantaneous and time-averaged data from each station will be transmitted from the data logger at each station to a Campbell CR6 data logger and PC computer (Central Station) located in or near the site's main control room.